Immediate Release
May 17, 2005

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Clemson's professor to testify on nanotechnology

Inglis Chairs Research Subcommittee of the House Science Committee

Clemson University mechanical engineering professor Dr. John Kennedy will be one of four witnesses to testify before the House Science Research Subcommittee Wednesday, May 18 at 10 a.m., on the barriers to commercialization of nanotechnology and workforce education and training issues.

Dr. Kennedy, also the Director for the Center for Advanced Engineering Fibers and Films, NSF Engineering Research Center, will testify on how the facility is helping South Carolina become a knowledge-based economy.

The Center is partnered with M.I.T. and Clark Atlanta University, while Clemson is the lead school. Some of the Center's industry partners include Michelin, Mitsubishi, Cryovac, Ansell, Polyester Film and Fuji Film.

Kennedy will also testify about using nanotechnology as a means for improving healing from surgery and wounds, adding nanoparticles to fibers to improve clothing which would help workers' safety, and applying it to food processing or handling of sharp materials such as glass or sheet metal.

"The National Nanotechnology Initiative provides a systemic program for helping the U.S. maintain its research and technology leadership in the increasingly competitive global environment," Kennedy said.

U.S. Rep. Bob Inglis (R-SC) will chair the subcommittee hearing.

"Nanotechnology involves arranging atomic particles so that they can be harvested, worked on or used as tools," Inglis explained. "When we 'crack' water by electrolysis, we may be able to harvest the hydrogen better if we can line up water molecules so that we know where the hydrogen is. Semiconductors can be made better by lining up atoms that have the desired electrical properties. Chemotherapy may be improved as we 'engineer' the position to attach only to cancer cells.

"Nanotechnology has huge potential," Inglis said. "By harnessing these cutting edge developments, we can also produce the next generation of innovation and advanced manufacturing jobs in America."

Nanotechnology is the creation of new materials, devices and systems through the manipulation of individual atoms and molecules. Clusters of small number of atoms or molecules often have different properties than the original material, ranging from strength, to electrical conductivity and optical absorption.

These properties are being applied to every day products, materials and markets. Products already on the market using nanotechnology include stain-resistant, wrinkle-free pants, ultraviolet-light blocking sunscreens and scratch-free coatings for eyeglasses and windows. As nanotechnology develops we can hope for faster computers, lighter materials for aircrafts, new and less invasive ways to treat cancer and other diseases and more efficient ways to store and transport electricity.

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